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DOCKET NO. 03-0485
81578 (6653)

Amendment to the Claims:

1-4 (canceled)

5 (currently amended): A method of qualifying a process tool comprising steps of:

(a) finding a plurality of pre-scan defect locations on a surface of a semiconductor wafer;

(b) subjecting the semiconductor wafer to processing by a process tool after step (a);

(c) finding a plurality of post-scan defect locations on the surface of the semiconductor wafer after step (b);

(d) calculating which defects were added by the process tool from the pre-scan defect locations and the post-scan defect locations;

(e) displaying a scatter plot of a point representative of a total number of defects added by the process tool to the semiconductor wafer; and

(f) The method of Claim 3 further comprising a step of selecting the point on the scatter plot to initiate a display of one of a pre-test wafer map, a post-test wafer map, and an added defect map of defects added by the process tool to the semiconductor wafer.

6 (previously presented): The method of Claim 5 further comprising a step of associating a spatial signature of added defects from the added defect map with a process tool malfunction.

7 (canceled)

8 (currently amended): A method of qualifying a

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process tool comprising steps of:

(a) finding a plurality of pre-scan defect locations on a surface of a semiconductor wafer;

(b) subjecting the semiconductor wafer to processing by a process tool after step (a);

(c) finding a plurality of post-scan defect locations on the surface of the semiconductor wafer after step (b);

(d) calculating which defects were added by the process tool from the pre-scan defect locations and the post-scan defect locations by comparing a distance between a first point corresponding to a defect location in a first list of pre-test defect locations and a second point corresponding to a defect location in a second list of post-test defect locations with a registration tolerance; and

(e) marking ~~The method of Claim 7 wherein the defect location in the second list corresponding to the second point is marked as a non-adder when~~ when ~~[[if]]~~ the distance is less than the registration tolerance.

9 (original): The method of Claim 8 wherein the first list and the second list are sorted by X-coordinate.

10 (original): The method of Claim 9 wherein defect locations in the first list and the second list having identical X-coordinates are further sorted by Y-coordinate.

11-14 (canceled)

15 (currently amended): A computer program product for qualifying a process tool comprising:

a medium for embodying a computer program for input to a computer; and

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a computer program embodied in the medium for causing the computer to perform steps of:

(a) finding a plurality of pre-scan defect locations on a surface of a semiconductor wafer;

(b) subjecting the semiconductor wafer to processing by a process tool after step (a);

(c) finding a plurality of post-scan defect locations on the surface of the semiconductor wafer after step (b);

(d) calculating which defects were added by the process tool from the pre-scan defect locations and the post-scan defect locations;

(e) displaying a scatter plot of a point representative of a total number of defects added by the process tool to the semiconductor wafer; and

(f) ~~The computer program product of Claim 13 further comprising a step of~~ selecting the point on the scatter plot to initiate a display of one of a pre-test wafer map, a post-test wafer map, and an added defect map of defects added by the process tool to the semiconductor wafer.

16 (previously presented): The computer program product of Claim 15 further comprising a step of associating a spatial signature of added defects from the added defect map with a process tool malfunction.

17 (canceled)

18 (currently amended): A computer program product for qualifying a process tool comprising:

a medium for embodying a computer program for input to a computer; and

a computer program embodied in the medium for causing the

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computer to perform steps of:

(a) finding a plurality of pre-scan defect locations on a surface of a semiconductor wafer;

(b) subjecting the semiconductor wafer to processing by a process tool after step (a);

(c) finding a plurality of post-scan defect locations on the surface of the semiconductor wafer after step (b);

(d) calculating which defects were added by the process tool from the pre-scan defect locations and the post-scan defect locations by comparing a distance between a first point corresponding to a defect location in a first list of pre-test defect locations and a second point corresponding to a defect location in a second list of post-test defect locations with a registration tolerance; and

(e) marking ~~The computer program product of Claim 17 wherein the defect location in the second list corresponding to the second point is marked as a non-adder when~~ when ~~[[if]]~~ the distance is less than the registration tolerance.

19 (original): The computer program product of Claim 18 wherein the first list and the second list are sorted by X-coordinate.

20 (original): The computer program product of Claim 19 wherein defect locations in the first list and the second list having identical X-coordinates are further sorted by Y-coordinate.